

comparing the input speech commands with pre-stored reference models; and

control means, responsive to the recognition result output from the interface, for controlling the telephony system in accordance with an input speech command;

wherein the speech recognition user interface is adapted to be able to recognize continuously spoken commands comprising a plurality of words defining a desired telephony service and an identifier of another user by comparing allowed sequences of word models, defined by a stored language model, with the input speech command, and wherein the control means comprises execution means for executing an operation corresponding to the input speech command.

64. A telephony system comprising:

a speech recognition user interface for allowing a user to input speech commands for controlling telephony services provided by the system, and for outputting a recognition result based on comparing the input speech commands with pre-stored reference models; and

execution means, responsive to the recognition result output from the interface, for executing an operation corresponding to the speech command,

wherein each user of the system is identified by a telephone number and an associated identifier, and wherein the execution means is adapted to predict, using current system status information, what telephony service is wanted, if the user inputs, via the speech recognition user interface, only the identifier of another user.

65. A system according to claim 63, wherein the execution means is adapted to communicate with users of the system in dependence upon information representative of the current status of the system, wherein the execution means is adapted

- i) to hold the current system status information;
- ii) to check that the operation corresponding to the speech command does not conflict with the current system status information; and
- iii) if there is no conflict, to request the user to confirm the speech command prior to execution, and

wherein a buffer is provided for buffering new system status information which is generated whilst the execution means awaits user confirmation.

66. A system according to claim 64, wherein the status information comprises, for each user, data indicating: who the user is currently speaking to, who the user is dialling, who is on hold, who is trying to ring that user, whether that user is playing messages, who has that user on hold, and/or who has that user in a conference.

67. A system according to claim 63, wherein the telephony services comprises one of the following services: setting up a call, transferring a call, holding a call, returning to a call, setting up a conference call, and message selection and replaying.

4/ 68. A system according to claim 63, wherein the control means further comprises interpretation means for interpreting the recognition result, which uses a factory set pre-

stored dictionary.

69. A system according to claim 63, wherein each user in the system has an associated storage means for storing the telephone numbers and associated identifiers of other users, whereby a user can designate another user of the system by speaking the corresponding identifier into the speech recognition user interface.

70. A system according to claim 69, wherein the execution means is adapted to predict, using current system status information, what telephony service is wanted if the user inputs, via the speech recognition user interface, only the identifier of another user.

71. A system according to claim 63, wherein the speech recognition user interface can be trained to recognize new speech commands.

72. A system according to claim 71, further comprising means for adapting the language model to accommodate the new speech commands, and wherein a means is provided for generating new reference models for those words in the new speech commands for which there is not an existing reference model.

73. A system according to claim 63, wherein each user has an associated set of reference models.

74. A system according to claim 63, wherein said control system is provided in a local exchange.

75. A system according to claim 63 in combination with the telephony system, further comprising a number of communication devices for use by user of the telephony system, which are interconnected via a local exchange.

76. A system according to claim 75, wherein the execution means is adapted to communicate with each of the users via the respective communication devices, information representative of the current status of the system.

~~13~~ 77. A system according to claim ~~75~~, wherein at least some of the communication devices have an associated display arranged to display messages representative of the operation corresponding to the input speech command, for a predetermined amount of time.

~~14~~ 78. A system according to claim ~~75~~, wherein the local exchange is connected to the public exchange so that users connected to the local exchange can communicate with remote users on the public exchange and vice versa.

~~15~~ 79. A system according to claim 75, further comprising a mail box facility which stores messages for users of the system left by callers, when the users are unable to take the

calls.

80. A system according to claim 79, wherein each message stored in the mail box facility is associated with the telephone number of the caller who left the message.

81. A system according to claim 80, wherein users can request, via the speech recognition user interface, the mail box to replay messages from a particular caller.

82. A system according to claim 81, wherein after replaying one of a plurality of selected messages a user can access other telephony services and return and replay the remaining selected messages after using those other telephony services.

83. A system according to claim 75, wherein the use of the speech recognition user interface and the execution means is time multiplexed between a number of different users.

84. A system according to claim 75, wherein a plurality of speech recognition users interfaces and execution means are provided, for simultaneous use by a plurality of different users.

85. A system according to claim 83, wherein said control system is provided in a communication device.

86. A method of controlling a telephony system comprising the steps of:

providing a control system for controlling the telephony system, comprising a speech recognition user interface for allowing a user to input speech commands for controlling the telephony system, and for outputting a recognition result based on comparing the input speech commands with pre-stored reference models, and control means, responsive to the recognition result output from the interface, for controlling the telephony system in accordance with an input speech command, wherein the speech recognition user interface is adapted to be able to recognize continuously spoken commands comprising a plurality of words defining a desired telephony service and an identifier of another user by comparing allowed sequences of word models, defined by a stored language model, with the input speech command, and wherein the control means comprises execution means for executing an operation corresponding to the input speech command;

inputting a speech command into the system via the speech recognition user interface;

outputting a recognition result based on a comparison of the input speech command with pre-stored reference models made by the speech recognition user interface; and

controlling the telephony system in response to the recognition result.

87. A data carrier programmed with software for carrying out a method according to claim 86.